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ABSTRACT

Non-traditional learners, adult learners who are age 21 or older, have many obstacles to overcome in their quest for knowledge. This paper investigates affective forces that influence non-traditional learners in a traditional computer lab and in a satellite-delivered instructional setting. Study participants consisted of 58 graduate and undergraduate students in off-campus satellite delivered courses and 10 undergraduate students in a traditional computer lab classroom. Data was gathered using a questionnaire; the Goal Orientation Index (GOI) which describes conative capacity; the Myers-Briggs Type Indicator (MBTI) which identifies participants' psychological type; participant journals; and student interviews. The study found a significant difference in the students' judging/perception attitudes. The satellite-delivered course participants, who are separated from the teacher, had a preference for the judging attitude which supports the theory that those individuals who prefer judging learn best when clear goals are established, there is a schedule, and there is closure. The computer lab classroom participants, who had immediate access to the teacher for guidance and spontaneity, had a preference for the perception attitude which supports the theory that those individuals who prefer perception are more flexible and adapt to last-minute changes. All learners were able to stay focused on the course when the teachers utilized a variety of teaching methods and models. Non-traditional learners have a high conative capacity, but it is essential to reinforce the interaction between learner and teacher in any classroom situation. Figures show GOA and MBTI study data. (Author/SWC)

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Conative Capacity of Non-Traditional Learners in Two Instructional Settings

M. Davis and M. J. Henry

Introduction

Non-traditional learners have many obstacles to overcome in their quest for knowledge. Whether or not they are successful in that quest depends in large part upon their desire and commitment. The instructional environment may also play a part in either distracting or encouraging the non-traditional student in fulfilling the goal of learning. Problems related to job and home are often overwhelming for the non-traditional learner and if the instructional environment adds to those problems, there is little hope of a successful experience in the classroom. Technology classrooms are notoriously problem filled and when not functioning properly, they can seriously distract any type of student.

The conative domain involves both motivation and volition and helps give meaning to why some are more successful at setting and achieving goals than others. Conation can be described as the intent to act, volition, striving, action control or, in other words, consciously striving to perform volitional acts. The conative domain is associated with goal-directed action and goal accomplishment style. Affective characteristics such as conation may help or hinder the learner in overcoming distractions and problems related to the acquisition of knowledge.

Statement of the Problem

Goal accomplishment style and/or psychological type of distance learners may influence their academic achievement in various distance education programs (Atman, 1990). Conation and the role of the teacher are important factors in the traditional classroom and the distance learning setting. A literature search of the conative capacity of learners in technology-related settings produced a minimal amount of related information.

Purpose of the Study

The purpose of this paper is to investigate affective forces that influence non-traditional learners in a traditional computer lab and in a satellite-delivered instructional setting. In this study, the term non-traditional learner will be synonymous with adult learner and is defined as one who is age 21 or older.

Research Questions

1. What is the relationship between the conative capacity in non-traditional learners in satellite-delivered instruction and non-traditional learners in a traditional computer lab classroom?
2. What are the relationships between the elements of conation, goal accomplishment style, and psychological types in non-traditional learners in satellite-delivered instruction and non-traditional learners in a traditional computer lab classroom?
3. What influence do teachers have on the conative capacity of non-traditional learners in satellite-delivered instructional and non-traditional learners in a traditional computer lab classroom?

Implications of the Study

This study is relevant in the area of curriculum and instruction, educational psychology, distance education course design, distance education instructional materials development, student support services, and other curriculum subject areas and disciplines where knowledge of student characteristics is essential. This study is also relevant as it relates to teaching effectiveness and helping students become better learners and helping technology teachers become better facilitators.

Related Literature

How individuals feel about an issue (affective), what they know or believe about the issue (cognitive), and their intention to act (conative) according to their feelings and knowledge are based on the tripartite theory of cognition, affection, and conation. Conation, which involves both motivation and volition, is described as the intent to act, striving, volitional control, or action control. Motivation is the pre-decision process and volition is the post-decision process (Park, 1991). Snow and Jackson (1992) conclude that some combination of the cognitive, affective, and conative is involved in human behavior, especially in learning and achievement. Learner characteristics in the conative domain include being motivated to continue learning and achieving; a genuine interest in the subject matter they are studying, and learner self-confidence and self-

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efficacy (Snow, 1989).

Adult learners have special needs and capacities that distinguish them from traditional-age students. They are a heterogeneous group and have been categorized according to age, role, and learning capacity (Schlossberg, Lynch, & Chickering, 1989). Park states that older students and higher achievers who are metamotivated and who are goal oriented will have more volitional control than younger and lower achievers who are less motivated and are not goal oriented. Knox (1986) states that most adult learners have the motivation and volition to move to a new level of learning and acquire new skills.

Methodology

Sample

Students registered in and attending two different instructional settings served as the sample for this study. A total of 58 graduate and undergraduate students from off-campus satellite delivered courses from a large Mid-Atlantic university and 10 undergraduate students in a traditional computer lab classroom from a branch campus of a large Mid-Western University participated.

Instruments

The 22-item researcher-developed questionnaire provided demographic information about the participants. The conative capacity of the participants was described and analyzed using the Goal Orientation Index (GOI). The GOI is a 96-item, Likert type inventory that provides information concerning an individual's "goal accomplishment style" by assessing relative strengths and weaknesses in the goal accomplishment process. Twelve subcategories of goal oriented behavior are identified and the relative strength of each category can be determined within the conation cycle.

The psychological type of the participants was described and analyzed using the Myers-Briggs Type Indicator (MBTI). The MBTI provides information concerning individual differences due to their focus of attention, the manner in which they process information, their decision-making skills, and their lifestyle.

Participant journals from the distance learners reflected habits and practices in setting individual, personalized goals; how they get and stay motivated; volitional practices when distracted, and reflective thoughts about the satellite-delivered courses.

Interview questions investigated student perceptions of goal-orientation activities, motivation, distractions in the learning environment, course goals, course assignments, teacher influences and practices.

Procedures

All students were assigned a research number which was used for purposes of identification and their number was recorded on all instruments used in the study. The GOI, MBTI and questionnaires were administered at the beginning of the semester. Participants from the satellite-delivered course were asked to keep a journal for at least six weeks.

Phone interviews were conducted at the end of the semester with three traditional computer lab class students who agreed to be interviewed after being chosen by the instructor from seven of the 16 Myers-Briggs types and conative style (high, medium, and low). Interviews from the satellite-delivered course were chosen from those who volunteered (n=14) after being chosen randomly (numbers drawn from a container) from all MBTI categories.

Data from questionnaires, interviews, and journals were analyzed qualitatively utilizing triangulation of data and intercoder reliability. Data from the GOI and MBTI were analyzed quantitatively and intercoded with the interviews and journals utilizing triangulation of data. The interviews and journals were used to reinforce the data collected from the GOI and MBTI.

Analysis of Data

Questionnaires

The data from the questionnaires is compared to data collected from non-traditional learners in off-campus satellite delivered courses from a large Mid-Atlantic university. Of the 20 questionnaires sent to students in the computer education course, 16 were completed and returned for a response rate of 80 % with 10 students being identified as non-traditional learners. Of those students identified as non-traditional learners, nine are female and one is male, seven are currently

undergraduate students and two have a bachelor's degree, six have prior experience in computer classes, and six are currently employed.

When asked how often they interacted with the teacher, the majority stated usually or sometimes. The majority of students also stated that the teacher usually provided adequate or personalized responses to questions, and usually or always provided personalized instruction during the course. The majority of the students also responded that they never or rarely had difficulty staying focused in the classroom or had difficulty visualizing goals for the course.

Goal Orientation Index

The data from the GOI is compared to data collected from non-traditional learners in off-campus satellite delivered courses from a large Mid-Atlantic university. The GOI is a 96-item, Likert type inventory that provides information concerning an individual's "goal accomplishment style" by assessing the relative strengths and weaknesses in the goal accomplishment process. There are 12 categories in the Goal Orientation Index which are grouped into three phases. For the statistical analysis of this study, scores from each category, together with the scores from each of the three phases (acting, planning, and reflecting) is used. Of the 20 Goal Orientation Index instrument and answer sheets sent to students in the computer education course, 20 were completed and returned for a response rate of 100 % with 10 students being identified as non-traditional learners.

The analysis of data from the Goal Orientation Index indicates that the top three areas of strength in the goal accomplishment process for non-traditional students in a traditional classroom are categories 8 (Make it happen) and 10 (Wrap it up) with a score of 34, categories 2 (Set goals) and 12 (Purpose, long range direction) with a score of 33, and categories 9 (Push on), 5 (Select strategy), 1 (Recognize need, problem), and 11 (Ooo & Ah!) with a score of 32. The bottom three scores which represent areas of improvement in the goal accomplishment process are category 4 (Assess risks) with a score of 26, category 3 (Brainstorm alternatives) with a score of 29, and category 6 (Get your act in gear) with a score of 30. These results are consistent with the data from the satellite-delivered sample in all 12 categories. Figure 1 illustrates the mean score in each category.

The 12 categories are grouped into three phases (four categories per phase). The strongest adult behavior is the acting phase, the next strongest behavior is the planning phase, and the least strong behavior is the reflecting phase. Based on data received from the study, the non-traditional students scored highest in the acting phase with a mean score of approximately 132. They are not as strong in the planning phase with a mean score of approximately 130. They are least strong in the reflecting phase with a mean score of approximately 117. These results are consistent with the data from the satellite-delivered course (n = 58) which indicated that non-traditional students distance learners scored highest in the acting category with a mean score of approximately 120, not as strong in the planning category with a mean score of approximately 116, and are least strong in the reflecting category with a mean score of approximately 104.

Myers-Briggs Type Indicator

The data from the MBTI is compared to data collected from non-traditional learners in off-campus satellite delivered courses from a large Mid-Atlantic university. The first part is a description of the types and the number of participants identified by categories, and the second describes the combination of preferences. The MBTI provides information concerning individual differences due to their focus of attention, the manner in which they process information, their decision-making skills, and their lifestyle. Of the 20 Myers-Briggs Type Indicator instruments and answer sheets sent to students in the computer education course, 19 were completed and returned for a response rate of 95 % with 10 students being identified as non-traditional learners. Table 1 illustrates the number of participants in each category.

Paired Comparisons of the GOI and MBTI

The data from the paired t-tests is compared to data collected from non-traditional learners in off-campus satellite delivered courses from a large Mid-Atlantic university. The analysis of paired t-tests of data collected from the Goal Orientation Index and the Myers-Briggs Type Indicator was examined to determine the "fit" between the individual's goal accomplishment style and the psychological type. For the statistical analysis of this study, paired t-tests were used to

examine the relationship, closeness, or association between paired scores on the categories of the GOI and the types of the MBTI. Figure 2 illustrates the results of the paired t-tests.

There was a significant difference between the extravert and introvert goal accomplishment styles on all 11 categories of the GOI. The extraversion attitude appears to assist in the goal accomplishment process. These results are consistent with the data from the satellite-delivered sample (n = 58) which indicated that non-traditional distance learners indicated a preference for the extraversion attitude in 12 of the GOI categories. Participants who indicated a preference for the intuitive function had a stronger goal accomplishment style profile on all 12 categories of the GOI. The intuitive function appears to assist in the goal accomplishment process. These results are consistent with the data from the satellite-delivered course (n = 58) which indicated that non-traditional distance learners indicated a preference for the intuitive function in 12 of the GOI categories. The goal accomplishment style profile of participants who preferred to use the feeling function was significantly stronger in all 12 categories of the GOI. The feeling function appears to assist in the goal accomplishment process. These results are consistent with the data from the satellite-delivered sample (n = 58) which indicated that non-traditional distance learners indicated a preference for the thinking function in 12 of the GOI categories. Goal accomplishment profiles of the participants who preferred the perception attitude was stronger in 10 categories of the GOI. These results are not consistent with the data from the satellite-delivered sample (n = 58) which indicated that non-traditional distance learners indicated a preference for the judging attitude. The judging attitude appears to assist in the goal accomplishment process for non-traditional learners in a traditional classroom. The satellite-delivered course participants in this study maybe exhibiting a commitment to both the content of the courses, process of delivery, which is satellite delivered instruction, and the fact that the teacher is not present in the classroom. The distance learners may be exhibiting the need to follow a plan, have closure, and relying on themselves to find the necessary information. The non-traditional leaners in the traditional classroom may be exhibiting the need to rely on the teacher to provide assistance as needed.

Interviews

The data from the interviews is compared to data collected from non-traditional learners in off-campus satellite delivered courses from a large Mid-Atlantic university. The three participants to be interviewed were selected from the scores on the Goal Orientation Index. One participant each with high scores, norm scores, and low scores was selected. The participant with high GOI scores is an ESFJ on the Myers-Briggs Type preference chart, the participant with the norm GOI scores is an ENTP Myers-Briggs Type preference chart, and the participant with the low GOI scores is an ENFP Myers-Briggs Type preference chart.

When asked about what they liked about being enrolled in the computer lab course, all of the participants interviewed said they enjoyed learning something new, having hands-on experience with the computers, and seeing how the computers work in the classrooms. When asked about what they disliked about being enrolled in the computer lab course, all of the participants stated they did not like reading the chapters and not getting to know the other people in the class because they were sitting in front of a computer.

Also, all agreed that the computer education teacher did not influence their behavior, but helped as much as she could, and made learning more interesting by using a variety of teaching styles (lecture, hands-on, cooperative learning, etc), and made the material interesting by putting it into a practical perspective and being enthusiastic about using computers. These methods helped the participants understand the course content because they were exposed to a wide variety of materials and they received personal contact from each other. The variety of teaching methods also helped the participants stay focused on the course work. One of the participants expressed that she wasn't bored because the students practice while the teacher's talking about it.

The participants stay motivated to complete the assignments for this course by knowing the goal which is to complete and pass the course, understanding the material, keeping a positive attitude, and to stay focused. One of the participants stated that she had a lot of self motivation because she knew the information was practical. Some of the goal setting strategies the participants employed included doing as much of the assignments in class as they could. Some of

the ways the participants handled distractions included studying after the families went to bed, ignore distractions because it was irrelevant to the activities, and reflecting on the days activities to see if anything was missed. None of the participants had any distractions in the classroom.

The participants with the high and norm GOI scores said they were mastery goal oriented learners because it was not important that people told them they were doing a good job. These participants also said they were extraverts because they enjoyed being around people. The participant with the low GOI scores indicated she was a performance goal oriented learner because she likes receiving favorable comment from other people. This participant also said she was an introvert because she enjoyed doing things by herself.

Discussion

What is the relationship between the conative capacity in non-traditional learners in satellite delivered instruction and non-traditional learners in a traditional computer lab classroom?

Because the distance learner and distance teacher are physically separated, the non-traditional learner in the distance classroom must assume a larger responsibility for their progress in setting and achieving personal and course goals. The availability of immediate feedback and assistance as needed when needed is usually absent from the distance classroom. On the other hand, non-traditional learner in the traditional classroom has the opportunity to interact face-to-face with the teacher and receive immediate feedback and help as soon as the problem occurs.

Based on data collected in this study, it can be concluded that there is a significant difference in the relationship between the conative capacity in non-traditional learners in satellite-delivered instruction and non-traditional learners in a traditional computer lab classroom which reinforces the interaction of teacher and student in the classroom. The remaining questions and the data collected in this study will assist in the further explanation of the relationship of these elements.

What are the relationships between the elements of conation, goal accomplishment style, and psychological types in non-traditional learners in satellite-delivered instruction and non-traditional learners in a traditional computer lab classroom?

The non-traditional learners who utilize more efficient goal achieving strategies are intrinsically motivated and more more volitional control over their behavior, therefore, those individuals have a higher conative capacity. Although the GOI scores of the non-traditional learners in the traditional classroom were slightly higher than the GOI scores of the non-traditional learners in the distance classroom, there was no significant difference in the comparison of the two groups. Both groups set and achieve realistic goals.

Data from the paired t-tests indicated no significant difference in the extravert, intuitive, and feeling preference in both groups of non-traditional learners, but there was a significant difference in the judging/perception preference. Non-traditional learners in the distance classrooms had a preference for judging, while non-traditional learners in the traditional classroom had a preference for perception. Those who have a preference for the judging need schedules, rely on plans and follow it, and reach closure quickly. This would support the fact that the learner and teacher are physically separated and have to contend with technical difficulties such as loss of video or audio signals, phone bridge failure, or delays in the mail system. Those who have a preference for perception are spontaneous, open to change, and may postpone decisions. This would support the fact that the teacher is physically present in the room and can easily change the assignment or schedule, and provide immediate feedback as needed.

Data from the interviews indicated that non-traditional learners who had high scores on the GOI were also mastery goal oriented learners and were able to stay focused on the course work because the teacher made learning more interesting by using a variety of teaching styles.

What influence do teachers have on the conative capacity of non-traditional learners in satellite-delivered instructional and non-traditional learners in a traditional computer lab classroom?

The data indicated that the teachers did not directly influence the behaviors of both groups of non-traditional learners. Both groups set and achieve realistic goals, were intrinsically motivated, and were more interested in learning when the teachers utilized a variety of teaching methods. The difference may be noted in the slightly higher GOI scores and the preference for perception attitude of the traditional classroom learners. The teacher is physically present in the

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classroom which may foster an atmosphere of confidence that when technical difficulties occur or the assurance that when immediate feedback or assistance is needed, the teacher will be there.

Conclusion

There was a significant difference between the judging/perception attitude. The satellite-delivered course participants, who are separated from the teacher, had a preference for the judging attitude which supports the theory that those individuals who prefer judging learn best when clear goals are established, there is a schedule, and there is closure. The computer lab classroom participants, who had immediate access to the teacher for guidance and spontaneity, had a preference for the perception attitude which supports the theory that those individuals who prefer perception are more flexible and adapt to last-minute changes. Perhaps having the teacher physically present in the classroom reassures the non-traditional student that if there are last-minute changes, the teacher will be there to lend support in some manner. All of the non-traditional learners were intrinsically motivated and had more volitional control over their actions. The interpretation of the questionnaires, journals, and structured interviews indicated that all of the teachers, whether they were physically separated from the learners or in the same classroom with the learners, were excellent role models and mentors because they encouraged critical thinking skills, provided practical information, promoted learner self-confidence and self-efficacy, and had a genuine interest in their students. The data also indicated that all of the learners were able to stay focused on the course when the teachers utilized a variety of teaching methods and models. It can be concluded that non-traditional learners can and do have a high conative capacity, but it is essential to reinforce the interaction between learner and teacher in any classroom situation.

This study needs to be replicated using a larger audience of non-traditional learners in traditional classrooms. The small number of traditional classroom participants may not be a representative sample to make further conclusions. Also, the environment in which the participants completed the questionnaires, GOI, MBTI, and interviews may have had an impact on the results of the study. The non-traditional classroom participants completed the questionnaire, GOI, and MBTI in the privacy of their home or at their place of employment, and the interviews were conducted during the evening in their homes. The traditional classroom participants completed the questionnaire, GOI, and MBTI in the classroom with the teacher present, and the interviews were conducted during the morning in the teacher's office. It is not known what influence these factors or the environment had on the responses of the participants.

REFERENCES

Atman, K. S. (1990). Psychological type elements and goal accomplishment style: Implications for distance education. In M. G. Moore (Ed.), *Contemporary issues in American distance education*. (pp. 136-150). Oxford, England: Pergamon Press.

Knox, A. B. (1986). *Helping adults learn*. San Francisco, CA: Jossey-Bass, Inc., Publishers.

Park, S. (1992). *Motivational beliefs, volitional control, and self-regulating learning*. Unpublished doctoral dissertation. The University of Michigan.

Schlossberg, N. K., Lynch, A. Q., & Chickering, A. W. (1989). *Improving higher education environments for adults*. San Francisco, CA: Jossey-Bass, Inc., Publishers.

Snow, R. E. (1989). Toward assessment of cognitive and conative structures in learning. *Educational Researcher, 18*(9), 8-14.

Snow, R. E., & Jackson, D. N. (1992). *Assessment of conative constructs for educational research and evaluation: A catalogue. Project 2.3: Enhancing the utility of performance assessments: Domain independent R & D*. Los Angeles, CA: National Center for Research on Evaluation, Standards, and Student Testing. Washington, DC: Office of Educational Research and Improvement (Ed.).

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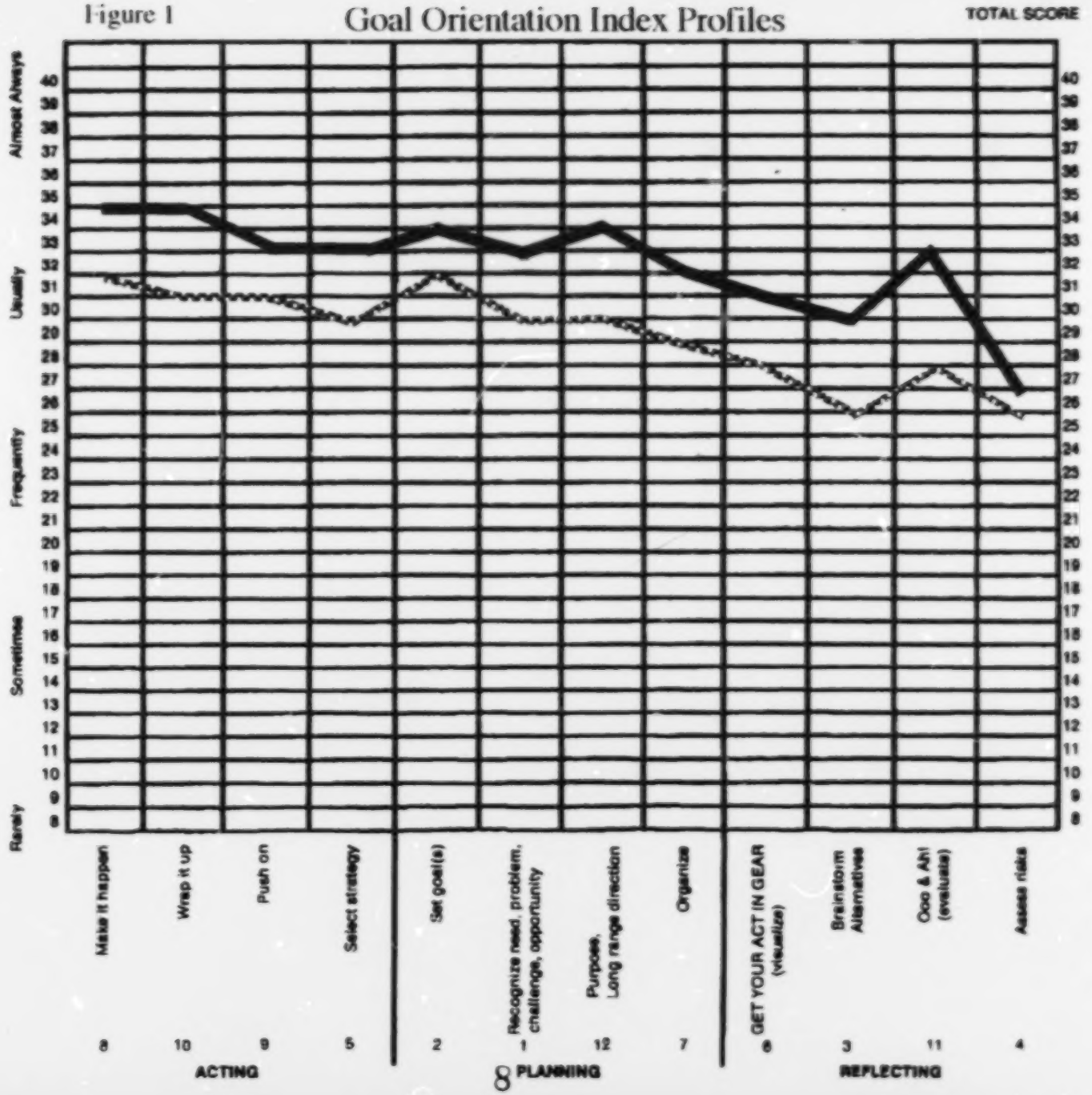
Figure 1

Goal Orientation Index Profiles



Traditional Classroom
n = 10

Non-traditional Classroom
n = 58

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Table 1

Number of Participants Identified By Categories in Myers-Briggs Type Indicator
n-10

ISTJ - 1 Tend to work alone, focus on facts, use Thinking in decision-making, are logical and well organized	**ISFJ - 1** Focus on the needs of others, are serious in their responsibilities, use Feeling to make decisions, are sensitive & thoughtful of others	**INFJ - 0**	**INTJ - 0**
ISTP - 0	**ISFP - 0**	**INFP - 1** Tend to value individuality, are sensitive, reflect on positive changes, have long-range vision, and fulfill obligations	**INTP - 1** Tend to be independent, objectively critical, can discuss theory and abstractions, and value competence
ESTP - 0	**ESFP - 0**	**ENFP - 4** Are energetic, creative innovators, spontaneous, adapt to others' needs, and can empathize with others	**ENTP - 1** Alert, outspoken, and good at many things. Resourceful in problem-solving, but does not like routine
ESTJ - 0	**ESFJ - 1** Are sociable, helpful, cooperative, realistic, and base decisions on experience	**ENFJ - 0**	**ENTJ - 0**

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Figure 2

Paired t-Tests for GOI & MBTI